

SPIDERS OF THE RUSSELL GRIMWADE EXPEDITION

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(Received for publication May 6, 1949.)

By the courtesy of the Director of the National Museum, to whom I am consequently indebted, I have been permitted to examine the spiders collected in Western Australia by the Russell Grimwade Expedition. Though much of the material consists of species that are already known from that State, several specimens have either not been recorded from there, or are entirely new. These specimens alone are mentioned in this paper, and the species represented are detailed hereunder.

Acknowledgments are made to Mr. L. S. G. Butler, of Melbourne, for literature not otherwise available.

Order ARANEAE
Suborder DIPNEUMONOMORPHAE
Branch TRIONYCHAE
Family ZODARIIDAE
Subfamily ZODARIINAE
Genus STORENA Walckenaer, 1805

SYNOPSIS OF AUSTRALIAN SPECIES

1. Leg iii longer than leg iv.	<i>S. cyanea</i> Walek.
- Leg iv longer than leg iii	2.
2. Both rows of eyes procurved.	3.
- Anterior row of eyes strongly recurved.	<i>S. variepes</i> Rainb.
3. Femorae each of two strongly contrasting colours.	4.
- Femorae uniform in colour.	11.
4. Femorae lighter in colour apically.	5.
- Femorae lighter in colour at base only.	6.
5. Dorsal surface of abdomen dark brown in colour, ornamented with white patches.	<i>S. auripes</i> Rainb.
- Dorsal surface of abdomen yellow-brown, spotted with pale yellow, but not ornamented.	<i>S. inornata</i> Rainb.
6. A.M.E. the largest of all eyes.	7.
- A.M.E. smaller than P.M.E. and P.L.E.	8.

7. A.M.E. and P.L.E. forming a recurved row. *S. macedonensis* Hogg.
 - A.M.E. and P.L.E. forming almost a straight row. *S. tricolor* Simon.
 8. A.M.E. and P.L.E. forming a straight row. *S. annulipes* (L. Koch).
 - A.M.E. and P.L.E. forming a recurved row. 9.
 9. Cephalothorax as broad as the length of tibia and patella iv. *S. braecata* (L. Koch).
 - Cephalothorax not broader than the length of tibia iv. 10.
 10. P.M.E. their diameter apart. *S. picta* (L. Koch).
 - P.M.E. their radius apart. *S. striatipes* (L. Koch).
 11. All eyes about equal in size. 12.
 - Eyes unequal in size. 15.
 12. Sternum glossy black in colour. 13.
 - Sternum dark reddish-brown in colour. 14.
 13. Area of median eyes subparallel. *S. tetriea* Simon.
 - Area of median eyes narrower in front than at rear. *S. albomaeulata* Rainb.
 14. A.M.E. and P.L.E. forming a proenrved row. *S. variegata* O. P. Cambr.
 - A.M.E. and P.L.E. forming a recurved row. *S. scintillans* O. P. Cambr.
 15. A.M.E. larger or at least not smaller than P.M.E. 16.
 - A.M.E. smaller than P.M.E. 22.
 16. A.M.E. and P.L.E. forming a procurved row. 17.
 - A.M.E. and P.L.E. forming a straight row. 18.
 - A.M.E. and P.L.E. forming a reeurved row. 21.
 17. Cephalothorax strongly wrinkled. *S. torosa* Simon.
 - Cephalothorax finely striated. *S. procera* Thorell.
 18. Cephalothorax coarsely granular. *S. formosa* Thorell.
 - Cephalothorax very finely granular. 19.
 19. Caput black, thorax yellowish-red in colour. *S. eximia* Simon.
 - Cephalothorax either uniform in colour or else more brightly
 coloured on the caput. 20.
 20. Sternum coarsely wrinkled. *S. spirafer* (L. Koch).
 - Sternum smooth, finely granular. *S. graeffei* L. Koch.
 21. P.M.E. about their diameter apart. *S. rastellata* Strand.
 - P.M.E. one-and-a-half diameters apart. *S. toddi* Hickman.
 22. A.L.E. smaller than A.M.E. 23.
 - A.L.E. larger or at least not smaller than A.M.E. 25.
 23. Legs 4, 3, 2, 1, or 4, 3, 1, 2. 24.
 - Legs 4, 1, 2, 3. *S. flavipes* (Urquhart).
 24. Profile of cephalothorax depressed near the thoracic fovea.
 S. bradleyi O. P. Cambr.
 - Profile of cephalothorax an even curve. *S. grimwadei* sp. nov.
 25. A.M.E. and P.L.E. forming a proenrved row. 26.
 - A.M.E. and P.L.E. forming a straight row. *S. seenica* (L. Koeh).
 - A.M.E. and P.L.E. forming a reenrved row (if belonging to
 this genus). *S. lycosoides* (Hogg).
 26. Legs 4, 2, 3, 1. *S. australiensis* O. P. Cambr.
 - Legs, 4, 1, 2 = 3. *S. maculata* O. P. Cambr.

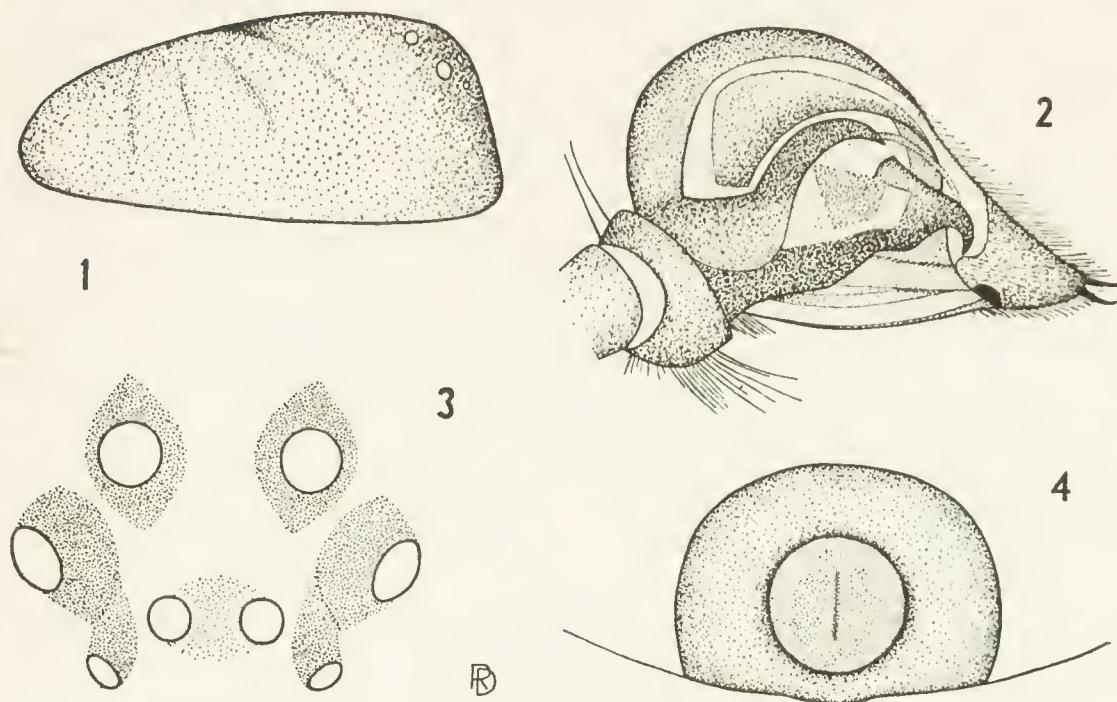
*Storena grimwadei* sp. nov.

Fig. 1. ♂ Profile of cephalothorax.

Fig. 2. ♂ Ventral view of left palpus.

Fig. 3. ♀ Dorso-anterior view of eyes.

Fig. 4. ♀ Epigynum.

Storena grimwadei sp. nov.

Figs. 1-4

Male (holotype).

							mm.
Total Length	..	..	..	..	..	..	4.36
Length of Cephalothorax	..	..	..	..	..	..	2.30
Width of Cephalothorax	..	..	..	..	..	..	1.67
Length of Abdomen	..	..	..	..	..	..	2.06
Width of Abdomen	..	..	..	..	..	..	1.53

	Femur	Patella	Tibia	Meta-tarsus	Tarsus	Total
Leg i	1.70	0.59	1.59	1.72	1.30	= 6.90
ii	1.76	0.62	1.55	1.81	1.34	= 7.08
iii	1.76	0.66	1.52	2.33	1.37	= 7.64
iv	2.65	0.66	2.26	3.57	1.89	= 11.03
Palp	0.90	0.37	0.19	—	1.12	= 2.58

Carapace light brown, eyes edged with black, a few black bristles around eyes and on clypeus. Chelicerae light brown. Maxillae, labium, and coxae yellowish brown. Sternum light brown, with scattered black bristles directed backwards. Legs and palpi light brown, with black spines. Abdomen dark brown, with a bluish sheen laterally; dorsal surface with four white spots, of which two are large and oval and are placed opposite each other near the middle, the other two nearer the apex in the median line, the first being semi-circular, truncate

behind, and the other long and shaped somewhat like an hour-glass. There are also two long, oblique, light brown stripes laterally; the anterior one extends round the front of the abdomen and almost joins in front. Ventrally, the abdomen is brown; spinnerets yellowish brown.

Carapace with finely granulate tegument, without hair; rounded laterally, only slightly narrower in front; profile as in Fig. 1. Thoracie fovea short, longitudinal.

Eyes arranged in two strongly proeurved rows, occupying area broader than long in the ratio of approximately 36 : 30. Ratio of eyes A.M.E. : A.L.E. : P.M.E. : P.L.E. = 5 : 4·5 : 7 : 7·5. The A.M.E. are separated from each other by 5/5, and from A.L.E. by 5/5 of the diameter of A.M.E. The P.M.E. are separated from each other by 7/5, and from P.L.E. by 10/5 of the diameter of A.M.E. The P.L.E. are separated from A.L.E. by 6/5, and from A.M.E. by 8/5 of the diameter of A.M.E. The P.L.E. and A.M.E form a recurved row when viewed from in front.

Chelicerae conical; lateral condyles present; margins of furrow without teeth, promargin with scopula. Fang short.

Maxillae strongly converging, with scopulae. *Labium* triangular, almost as broad as long.

Sternum shield-shaped, almost as broad as long, extended posteriorly into a short point between coxae iv, anterior margin straight.

Legs 4, 3, 2, 1. Trichobothria in two rows on tibiae, in one row on metatarsi and tarsi. Three tarsal claws, the superior claws with about ten teeth, the inferior claw small and unarmed. Palpal bulb has the form shown in Fig. 2.

Spines on legs and palpi arranged as follows: *First leg*—Femur: dorsal 1.1.1, prolateral 1, elsewhere 0. Patella: 0. Tibia: dorsal 1 near base, prolateral 1.1.1, retrolateral 0, ventral 2.2.2. Metatarsus: dorsal 0, prolateral 1.1, retrolateral 1 apical, ventral 2.2.2. *Second leg*—as in leg i. *Third leg*—Femur: dorsal 1.1.1, elsewhere 0. Patella: dorsal 1, prolateral 2, elsewhere 0. Tibia: dorsal 2.1.1.1.2.1.1.1.2, prolateral 1.1.1, retrolateral 1, ventral 2.2.2. Metatarsus: dorsal 1.1.2, prolateral 1.1.1, retrolateral 1.1.1, ventral 2.2.2.2.2. *Fourth leg*—Femur: dorsal 1.1.1, elsewhere 0. Patella: prolateral 1, retrolateral 1, elsewhere 0. Tibia: dorsal 1.1.1, prolateral 1.1.1, retrolateral 1, ventral 2.2.2. Metatarsus: dorsal 1.1.2, prolateral 1.1.1, retrolateral 1.1.1, ventral 2.2.2.2.2. All tarsi have numerous short spines ventrally. *Palp*—Femur: dorsal 1.1, elsewhere 0. Patella: prolateral 1, elsewhere 0. Tibia: prolateral 1 long, elsewhere 0.

Abdomen oval; anterior spinnerets longer than the posterior pair.

Female (allotype).

							mm.
Total Length	..	..	..	..	..	..	5·46
Length of Cephalothorax	..	..	..	..	..	..	2·73
Width of Cephalothorax	..	..	..	..	..	..	2·04
Length of Abdomen	..	..	..	..	..	..	2·73
Width of Abdomen	..	..	..	..	..	..	2·06
	Femur	Patella	Tibia	Meta-tarsus	Tarsus	Total	
Leg i	1·84	0·71	1·55	1·86	1·28	=	7·24
ii	2·02	0·78	1·52	1·87	1·26	=	7·45
iii	2·02	0·86	1·64	2·43	1·36	=	8·31
iv	2·61	0·86	2·30	3·61	1·84	=	11·22
Palp	0·96	0·58	0·50	—	0·81	=	2·85

Except for the following details, the description of the female is similar to that of the male.

The dorsal surface of the abdomen has, towards the base, an additional pair of white spots which are much smaller than the median pair; and the lateral stripes are white.

Eyes as in Fig. 3, occupying area broader than long in the ratio of approximately 46 : 35. Ratio of eyes A.M.E. : A.L.E. : P.M.E. : P.L.E. = 5 : 4.5 : 7 : 8. The A.M.E. are separated from each other by 5/5, and from A.L.E. by 6/5 of the diameter of A.M.E. The P.M.E. are separated from each other by 12/5, and from P.L.E. by 11/5 of the diameter of A.M.E. The P.L.E. are separated from A.L.E. by 9/5, and from A.M.E. by 10/5 of the diameter of A.M.E.

Palp with a single tarsal claw provided with about seven short teeth.

Spines on legs as in male, except for tibia iii dorsally, which has 1.1.1 only. *Palp*—Tibia: dorsal 1 bristle, prolateral 2.1 bristles, elsewhere 0. Tarsus with numerous spines ventrally.

Epigynum has the form shown in Fig. 4.

Locality. About 40 miles west of Euela, W.A.; one male and two females, collected by R. T. M. Peseott, August 30, 1947. Mr. Peseott remarked that they were captured in the act of preying on the ant *Iridomyrmex* (?) *detectus* (Smith).

Types in the National Museum of Victoria. Named in honour of the Chairman of Trustees and Expedition leader, Sir Russell Grinwade.

Branch DIONYCHAE
Family GNAPHOSIDAE
Subfamily DRASSODINAE
Genus PRIONOSTERNUM nov.

Cephalothorax suboval, only slightly narrowed anteriorly; thoracic fovea short, longitudinal.

Eyes eight, in two procurved rows, heterogeneous, A.M.E. alone diurnal. A.M.E. smaller than A.L.E. and closer to them than the space between each other. Median ocellar quadrangle broader than long, and broader at rear than in front.

Chelicerae with both margins armed with two teeth.

Maxillae parallel, inner margin bevelled; palpi inserted at base. *Labium* longer than broad, slightly tapered, apex truncale.

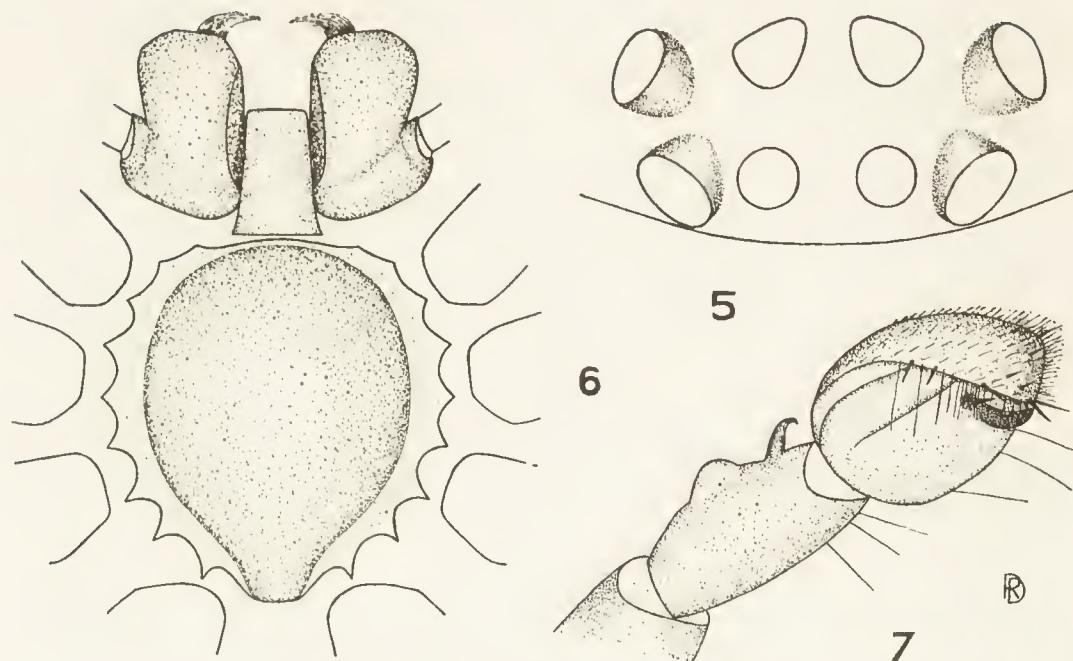
Sternum cordate, with serrated flange; coxae iv well separated.

Legs 4, 1, 2, 3, prograde; i and ii without spines, iii and iv almost likewise.

Abdomen oval, with dorsal scuta; anterior spinnerets close together.

Differs from *Anzacia* Dalmas principally in having the A.M.E. smaller than A.L.E., the sternum with a serrated flange, legs i and ii unarmed and legs iii and iv almost so, and the abdomen with a dorsal scuta.

Genotype: *P. scutatum* sp. nov.



Prionosternum scutatum gen. et sp. nov.

Fig. 5. Dorso-anterior view of eyes.

Fig. 6. Maxillae, labium, and sternum.

Fig. 7. Ventral view of right palpus.

Prionosternum scutatum sp. nov.

Figs. 5-7

Male (holotype).

							mm.
Total Length	..	..	..	..	..	..	4·14
Length of Cephalothorax	..	..	..	..	..	..	1·99
Width of Cephalothorax	..	..	..	..	..	..	1·53
Length of Abdomen	..	..	..	..	..	..	2·15
Width of Abdomen	..	..	..	..	..	..	1·25

	Femur	Patella	Tibia	Meta-tarsus	Tarsus	Total	
Leg i	1·53	0·80	1·30	1·09	0·74	=	5·46
ii	1·36	0·77	1·11	0·90	0·65	=	4·79
iii	1·12	0·59	0·84	0·78	0·44	=	3·77
iv	1·56	0·78	1·36	1·31	0·65	=	5·66
Palp	0·53	0·37	0·34	—	0·52	=	1·76

Width of Patella i at "knee": 0·22 mm. Tibial Index 11.

Width of Patella iv at "knee": 0·24 mm. Tibial Index 11.

Carapace brown, thorax with black granules. Chelicerae brown. Maxillae, labium, and sternum light brown. Legs and palpi yellowish, the femora greyish yellow. Abdomen dark grey above; sides and apex whitish; ventral surface light grey, with four converging longitudinal lines of whitish spots; between the epigastric furrow and the base of the abdomen yellowish; spinnerets whitish, encircled by a line of dark grey.

Carapace suboval, slightly narrowed anteriorly, anterior margin obtusely truncate, posterior margin excavated; convex; caput smooth, thorax with granulations forming a pattern radiating from the fovea. Thoracic fovea short, longitudinal. Clypeus equal to approximately 3/7 of the diameter of A.M.E.

Eyes as in Fig. 5, in two proeurved rows, heterogeneous, A.M.E. alone diurnal. Ratio of eyes A.M.E. : A.L.E. : P.M.E. : P.L.E. = 7 : 10 : 10 : 9.5. The A.M.E. are separated from each other by 7/7, from A.L.E. by 4/7, and from P.M.E. by 7/7 of the diameter of A.M.E. The P.M.E. are ovate, separated from each other by 5/7, and from P.L.E. by 8/7 of the diameter of A.M.E. The P.L.E. are separated from A.L.E. by 5/7 of the diameter of A.M.E. Median ocular quadrangle occupying area broader at rear than in front in the ratio of approximately 25 : 21, and broader, at rear, than long in the ratio of approximately 25 : 22.

Chelicerae conical, sparsely covered with long setae, margins oblique. Promargin with scopula and two teeth, the one nearer the base of the fang the larger. Retromargin with two teeth, the one further from the base of the fang the larger. Fang short.

Maxillae as in Fig. 6, parallel, with apical scopulae, impressed transversely; outer margin concave, palpi inserted at base; inner margin bevelled. *Labium* reaching to almost two-thirds of the height of the maxilliae, slightly tapered anteriorly, longer than broad in the approximate proportion of 4 : 3, apex truncate.

Sternum cordate, convex, with serrated flange, longer than broad in the ratio of approximately 8 : 7, surface sparsely provided with setae. Coxae iv well separated.

Legs 4, 1, 2, 3; sparsely provided with setae, those under tibiae and metatarsi i and ii being longer and almost erect; apices of metatarsi iii and iv ventrally with more numerous bristles. Tarsi with two claws and claw-tufts, each claw with three teeth of which the basal is much the smallest; no scopulae. Trichobothria in three rows on tibiae, in one row on metatarsi, and in two rows on tarsi. *Palpi* with a short, spur-like apophysis on the retrolateral apex of the tibia. Palpal bulb has the form shown in Fig. 7.

Spines on legs and palpi present only as follows: Tibia iii : ventral 1.2. Tibia iv : retrolateral 0.1, ventral 1.2. Metatarsus iv : ventral 1.0.

Abdomen oval, provided with oval dorsal scuta; clothed with short black setae. Spinnerets six, cylindric; anterior pair separated by less than half their diameter, slightly stouter than posterior pair.

Locality. Pimlea, W.A.; a single male, collected by R. T. M. Pescott, September 7, 1947.

Holotype in the National Museum of Victoria.

Family SALTICIDAE

Division UNIDENTATI

Subfamily MARPISSINAE

Genus CLYNOTIS Simon, 1901

Clynotis viduus (L. Koch)

1879. *Icius viduus* L. Koch, Die Arach. Austr., ii, p. 1129, tab. xcviii, figs. 4-4d, 5-5d.

1901. *Clynotis viduus*, Simon, Hist. Nat. Araign., ii, p. 600.

A single male specimen from Koonalda, W.A., collected by R. T. M. Pescott, August 29, 1947, which I ascribe to this species. The markings are very different from those figured by L. Koch, but, as he has already pointed out, the pattern is not constant.

Previously recorded from Queensland and New South Wales.

Division FISSIDENTATI

Subfamily CYTAEINAE

Genus CYTAEA Keyserling, 1882

SYNOPSIS OF AUSTRALIAN SPECIES

1. Leg i the longest.	2.
- Legs iii and iv longer than leg i.	4.
2. Sternum about one-third longer than broad.	3.
- Sternum twice as long as broad.	<i>C. albiventris</i> (Keys.).
3. Labium trunecate at apex.	<i>C. alburna</i> Keys.
- Labium rounded at apex.	<i>C. morrisoni</i> sp. nov.
4. Labium rounded at apex.	5.
- Labium excavated at apex.	<i>C. grisea</i> Keys.
5. Metatarsi iii and iv more than twice the length of their tarsi.	<i>C. clarovittatus</i> (Keys.).
- Metatarsi iii and iv only slightly longer than their tarsi.	6.
6. Patellae i and ii with 1 prolateral, tibiae i and ii with 3 prolateral spines.	<i>C. infrastriatus</i> (Keys.).
- Patellae i and ii without any, tibiae i and ii with 1 prolateral spine.	<i>C. piligera</i> Keys.

Cytaea morrisoni sp. nov.

Figs. 8-9

Male (holotype).

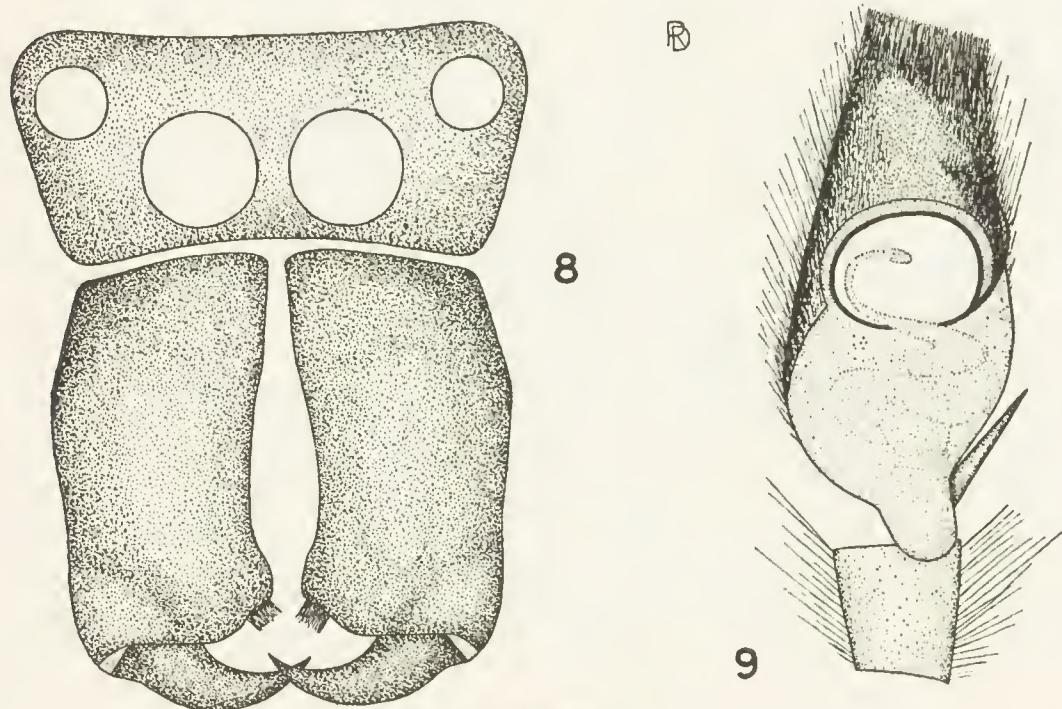
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total	mm.
Total Length	..	..	..	..	..	..	7·9
Length of Cephalothorax	..	..	..	..	..	..	3·8
Width of Cephalothorax	..	..	..	..	..	..	3·2
Length of Abdomen	..	..	..	..	..	..	4·1
Width of Abdomen	..	..	..	..	..	..	3·5
Leg i	2·76	1·74	1·99	1·61	0·75	=	8·85
ii	2·42	1·52	1·62	1·50	0·61	=	7·67
iii	2·36	1·25	1·26	1·59	0·62	=	7·08
iv	2·36	1·24	1·50	1·85	0·62	=	7·57
Palp	1·25	0·61	0·46	—	1·34	=	3·66

Carapace brown, with light brown and greyish fusiform hairs; caput dark brown; eyes pearly. Chelicerae and maxillae brown, labium dark brown; maxillae and labium lighter, almost yellowish, apically. Sternum brown. Legs and palpi brown; femora dark brown; tarsus and apical two-thirds of metatarsus of leg i light brown, of legs ii, iii, and iv, yellowish, all metatarsi darker apically. Abdomen mottled in grey and yellowish, with black bristles, and light

brown and greyish hairs; extending from near the middorsal position towards the apex, is an indistinct, darker grey pattern of about five chevrons; ventral surface light brown, with a lenticular figure outlined by lines of yellowish spots.

Carapace high, convex; caput almost flat, thorax declivous. Thoracic fovea short and longitudinal. Clypeus retreating, fringed with long bristles, equal to approximately 1/6 of the diameter of A.M.E.

Eyes arranged in three rows, the anterior row recurved so that a line joining the lower edges of the A.L.E. passes through the upper half of the A.M.E. Ratio of eyes A.M.E. : A.L.E. : P.M.E. : P.L.E. = 21 : 13 : 3 : 11. The A.M.E. are separated from each other by 5/21, and from A.L.E. by 9/21 of the diameter of A.M.E. The P.M.E. are separated from A.L.E. by 16/21, and from P.L.E. by 17/21 of the diameter of A.M.E. The P.L.E. are separated from each other by 63/21 of the diameter of A.M.E., and are raised somewhat on black mounds. Ocular quadrangle occupies an area broader in front than at rear in the ratio of approximately 49 : 47, and broader, in front, than long in the ratio of approximately 49 : 37.



Cytaea morrisoni sp. nov.

Fig. 8. Front view of chelicerae and anterior eyes.

Fig. 9. Ventral view of left palpus.

Chelicerae as in Fig. 8, arenated, provided with long bristles in front, with oblique margins. Retromargin with a large bicuspid tooth. Promargin with three teeth.

Maxillae converging, with apical scopulae. *Labium* more than half the length of the maxillae, longer than broad in the ratio of approximately 6 : 5, subtriangular, apex and corners of base rounded.

Sternum oval, convex, broadly truncate in front, longer than broad in the ratio of approximately 6 : 5.

Legs 1, 2, 4, 3, with two tarsal claws and claw-tufts. Claws dissimilar, retro-lateral with about 19 teeth, pro-lateral with about 9 teeth. Trichobothria in two rows on tibiae, in one row on metatarsi and tarsi. *Palpi* with a short, pointed apophysis at the retro-lateral apex of tibia; a few long bristles are present, but no spines. Palpal bulb has the form shown in Fig. 9.

Spines on legs arranged as follows: First leg—Femur: dorsal 1.1.1, pro-lateral 2 apical, retro-lateral 1, ventral 0. Patella: pro-lateral 1, retro-lateral 1, elsewhere 0. Tibia: dorsal 0, pro-lateral 1.1, retro-lateral 1, ventral 2.2.2. Metatarsus: dorsal 0, pro-lateral 1.1, retro-lateral 1.1, ventral 2.2. *Second leg*—as in leg i. *Third leg*—Femur and patella: as in leg i. Tibia: dorsal 0, pro-lateral 1.1, retro-lateral 1.1, ventral 2 apical. Metatarsus: dorsal 0, pro-lateral 1.2, retro-lateral 1.2, ventral 2.2. *Fourth leg*—Femur and patella: as in leg i. Tibia: dorsal 0, pro-lateral 1.1, retro-lateral 1.1.1, ventral 2 apical. Metatarsus: as in leg iii. There are no spines on the tarsi.

Abdomen oval, somewhat flattened dorsally. Spinnerets six, subcylindrical, the anterior pair the stoutest.

Locality. Ravensthorpe-Ongerup, W.A., a single male, collected by R. T. M. Pescott, September 3, 1947.

Holotype in the National Museum of Victoria. Named in honour of Mr. P. Crosbie Morrison, M.Sc., a Museum Trustee and a member of the Expedition.

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